

The SF CAN Tobacco Teams work to reduce tobacco-related cancers by advancing evidence-based tobacco control policies, expanding access to tobacco cessation services, and developing innovative approaches that help people quit smoking and vaping. There are three Teams within the SF CAN Tobacco group:

Team 1: Supporting Tobacco Cessation for People Experiencing Homelessness



Image credit: Mission Local News

Who we are:

Team Leads:

Maya Vijayaraghavan, MD, MAS, Dorie Apollonio, PhD MPP and Lisa Kroon, PharmD

Other UCSF team members:

Jessica Alway, MPH, Jessica Escobar, MPH, Deepalika Chakravarty, MS

Partners:

- Five Keys Home Free
- Bayshore Navigation Center
- Embarcadero SAFE Navigation Center
- Next Door Homeless Shelter
- Safeway pharmacy
- San Francisco Health Plan (SFHP)
- Project Homeless Connect
- San Francisco Department of Public Health

Success 1: Using a unique community-pharmacist partnership model, we provided cessation services to people experiencing homelessness who stayed in homeless shelters in San Francisco.

Our approach:

In the past 9 years, the Tobacco 1 Team has worked with people experiencing homelessness to provide access to tobacco cessation services. We have recruited over 250 people experiencing homelessness over the past 5 years to join a cessation program that provides pharmacist consultation, pharmacist-prescribed nicotine replacement therapy, and delivery of cessation medications to shelters. We have measured quit attempts and a reduction in consumption. With each iteration, we have consistently shown that engagement in our program is associated with a reduction in tobacco consumption by 50% or more and an increase in quit attempts by 33%. We have continued to train shelter staff to become cessation champions at each site.

Research prompting this approach:

Research shows that smoking prevalence among low-income populations, including people experiencing homelessness, ranges from 57% to 82%, far exceeding rates in the general population.

- Baggett TP, Hwang SW, O'Connell JJ, Porneala BC, Stringfellow EJ, Orav EJ, Singer DE, Rigotti NA. Mortality among homeless adults in Boston: shifts in causes of death over a 15-year period. JAMA Intern Med. 2013 Feb 11;173(3):189-95. doi: [10.1001/jamainternmed.2013.1604](https://doi.org/10.1001/jamainternmed.2013.1604). PMID: 23318302; PMCID: PMC3713619.

Future Goals:

The Tobacco 1 Team has leveraged their model to obtain funding from the Tobacco-Related Disease Research Program to expand this approach to additional cities, including San Francisco and Los Angeles.

News:

In June 2025, Dr. Maya Vijayaraghavan was interviewed for “*Why Is It So Hard for Older Adults to Quit Smoking?*”, an AARP article examining smoking rates among middle-aged and older adults and the cessation strategies needed for these populations. [The full article can be found here.](#)

Success 2: Providing a cessation booth with counseling, free nicotine replacement therapy at the Project Homeless Connect Community Day of Service events.

Our approach:

The Project Homeless Connect Community Day of Service events are large community-led events, each attended by over 1000 people experiencing homelessness, where we offer a cessation booth with counseling, free nicotine replacement therapy, and resources for cessation. In total, over the past 8 years, we have served over 170 people experiencing homelessness to provide cessation treatment during these events.

Research prompting this approach:

This paper reports the impact of tobacco cessation efforts delivered at large-scale community service events, showing that providing counseling and free nicotine replacement therapy is an effective way to engage adults experiencing homelessness in smoking cessation.

- Vijayaraghavan M, Apollonio DE. Engaging adults experiencing homelessness in smoking cessation through large-scale community service events. *Health Promot Pract.* 2019 May;20(3):325-327. doi: [10.1177/1524839919835280](https://doi.org/10.1177/1524839919835280). Epub 2019 Mar 7. PMID: 30845844; PMCID: PMC7263353.

Future Goals:

The Tobacco 1 Team plans to continue participating in Project Homeless Connect Community Day of Service events to expand access to tobacco cessation services for people experiencing homelessness.

Publications:

1. Vijayaraghavan M, Apollonio DE. Engaging adults experiencing homelessness in smoking cessation through large-scale community service events. *Health Promot Pract.* 2019 May;20(3):325-327. doi: [10.1177/1524839919835280](https://doi.org/10.1177/1524839919835280). Epub 2019 Mar 7. PMID: 30845844; PMCID: PMC7263353.
2. Vijayaraghavan M, Elser H, Frazer K, Lindson N, Apollonio D. Interventions to reduce tobacco use in people experiencing homelessness. *Cochrane Database Syst Rev.* 2020 Dec;12(12):CD013413. doi: [10.1002/14651858.CD013413](https://doi.org/10.1002/14651858.CD013413.pub2).pub2. PMID: 33284989; PMCID: PMC8130995.
3. Hartman-Filson M, Chen J, Lee P, Phan M, Apollonio DE, Kroon L, Donald F, Vijayaraghavan M. A community-based tobacco cessation program for individuals experiencing homelessness. *Addict Behav.* 2022 Jun; 129:107282. doi: [10.1016/j.addbeh.2022.107282](https://doi.org/10.1016/j.addbeh.2022.107282). Epub 2022 Feb 16. PMID: 35184003.

4. De Los Reyes G, Ng A, Valencia Chavez J, Apollonio DE, Kroon L, Lee P, Vijayaraghavan M. Evaluation of a pharmacist-linked smoking cessation intervention for adults experiencing homelessness. Subst Use Misuse. 2023 Jul 3:1-9. doi: [10.1080/10826084.2023.2231060](https://doi.org/10.1080/10826084.2023.2231060). Epub ahead of print. PMID: 37401115.

Team 2: Helping Young People Quit Vaping



Who we are:

Team Lead:

Pamela Ling, MD, MPH

Faculty:

Nhung Ngyuen

Nadra Lisha

Postdocs:

Joanne Lyu

Minji Kim

Karla Llanes

Allison Temourian

Pharmacy Students:

Allison Lee

Angela Chang

Pallavi Chaudry

Predoctoral students:

Aliyyat Afolabi
Elaine Cheung
Kaira Shlipak
Olivia Chen

Partners:

- [HopeLab](#)
- [Rescue Agency](#)
- California Department of Education TUPE program
- Oklahoma TSET
- South Carolina Department of Health
- Blue Cross and Blue Shield of Minnesota

Success 1: Quit the Hit provides smoking cessation education and peer support for young adults in a more accessible way.

Our approach:

Quit the Hit uses direct messages in Instagram group chats to support young people through the quitting process. Quit the Hit offers support in private groups via Instagram Direct Messages. Participants receive five weeks of quit support through daily education and group challenges. These groups consist of 10-15 people and are actively facilitated by a trained counselor, known as the group guide.

Research prompting this approach:

Young adults are much more likely to sign up for a social media-based intervention than to call a Quitline.

We tested the efficacy of “Quit the Hit”, a program delivering e-cigarette cessation support in Instagram groups in a randomized controlled trial.

500 adolescents and young adults (age 13-21) residing in California were recruited online and randomized to intervention or Quitline control. We found that among our participants, 70.4% used e-cigarettes daily, and 78.2% within 30 minutes of waking. Retention rates were 43.6% at 5 weeks, 23.0% at 3 months, and 28.0% at 6 months.

We found the intervention group had a significantly greater odds of abstinence, with a time-averaged abstinence rate (which takes into account missing data) of **53.8%** over six months compared to the control condition (**40.3%**) (OR = 2.07, 95%CI = 1.21, 3.52, p = 0.008). The intervention was highly acceptable and engaging, with 59.7% of participants active on the last day of the group. Quit the Hit participants reported greater agreement with measures of social

support while quitting, with no differences in overall program evaluation measures compared to the California Quitline.

Future Goals:

The team has received a new R01 that will support expanding the work to 3 additional states in the US. This will allow for the development of a scalable version of the program that can be widely implemented.

News:

- Dr Pam Ling was in [NYTimes article](#) about the hazards of Vaping
- The unfortunate [new development](#) is that the FDA just approved JUUL for marketing in the USA. It is possible that the need for vaping cessation will be even greater as these products are now legal to sell.

Publications:

1. Ling PM, Lisha NE, Neilands TB, Jordan JW. [Join the commune: A controlled study of social branding influencers to decrease smoking among young adult hipsters](#). *Am J Health Promot*. 2020;34(7):754-761. doi:10.1177/0890117120904917.
2. Pravosud V, Holmes LM, Lempert LK, Ling PM. Impact of policies restricting flavors in non-cigarette tobacco products: A study of vape shops in San Francisco and Alameda Counties.
3. Kim M, Olson S, Jordan J, Ling PM. [Peer crowd-based targeting in e-cigarette advertisements: A qualitative study to inform counter-marketing](#). *BMC Public Health*. 2020;20:32. doi:10.1186/s12889-019-8126-x.
4. Vogel EA, Guillory J, Ling PM. [Sponsorship disclosures and perceptions of e-cigarette Instagram posts](#). *Tob Regul Sci*. 2020;6(5):355-368.
5. Watkins SL, Thrul J, Max W, Ling PM. [Real-world effectiveness of smoking cessation strategies for young and older adults: Findings from a nationally representative cohort](#). *Nicotine Tob Res*. 2020;22(9):1560-1568. doi:10.1093/ntr/ntz223.
6. Toledo G, McQuoid J, Ling PM. ["It's not too aggressive": Key features of social branding anti-tobacco interventions for high-risk young adults](#). *Health Promot Pract*. 2020. doi:10.1177/1524839920910372.

7. Vyas P, Ling P, Gordon B, Callewaert J, Dang A, Smith D, Chan B, Glantz S. [Compliance with San Francisco's flavored tobacco sales prohibition](#). *Tob Control*. 2020. doi:10.1136/tobaccocontrol-2019-055549.
8. Nguyen N, Neilands TB, Lisha NE, Lyu JC, Olson SS, Ling PM. [Longitudinal associations between use of tobacco and cannabis among people who smoke cigarettes in real-world smoking cessation treatment](#). *J Addict Med*. 2021. doi:10.1097/ADM.0000000000000920.
9. McQuoid J, Keane H, Ling PM. [Purposeful play: Exploring a bar-based, anti-tobacco intervention for young adults](#). *Drugs Educ Prev Policy*. 2021. doi:10.1080/09687637.2021.1932753.
10. Holmes LM, Thrul J, Warren N, Ling PM. [Local variation in cannabis use patterns among young adults in the San Francisco Bay Area](#). *Spat Spatiotemporal Epidemiol*. 2021;37:100418. doi:10.1016/j.sste.2021.100418.
11. Lee A, Chang AA, Lyu JC, Ling PM, Hsia SL. [Characterizing participant perceptions about smoking-cessation pharmacotherapy and e-cigarettes from Facebook smoking-cessation support groups](#). *Int J Environ Res Public Health*. 2022;19(12):7314. doi:10.3390/ijerph19127314.
12. Lyu JC, Afolabi A, White JS, Ling PM. [Perceptions and aspirations toward peer mentoring in social media-based e-cigarette cessation interventions for adolescents and young adults: A focus group study](#). *JMIR Form Res*. 2022. doi:10.2196/42538.
13. Lyu JC, Olson SS, Ramo DE, Ling PM. [Delivering vaping cessation interventions to adolescents and young adults on Instagram: Protocol for a randomized controlled trial](#). *BMC Public Health*. 2022;22:2311. doi:10.1186/s12889-022-14606-7.
14. Nguyen N, Holmes LM, Pravosud V, Cohen BE, Ling PM. [Changes in perceived harms of tobacco and cannabis and their correlations with use: A panel study of young adults, 2014-2020](#). *Addict Behav*. 2023;144:107758. doi:10.1016/j.addbeh.2023.107758.
15. Lyu JC, Meacham MC, Nguyen N, Ramo D, Ling PM. [Factors associated with abstinence among young adult smokers enrolled in a real-world social media smoking cessation program](#). *Nicotine Tob Res*. 2024;26(suppl 1). doi:10.1093/ntr/ntad170.

Team 3: Successfully banning menthol cigarette sales in San Francisco, California and other states.



Who we are:

Lead: Valarie Yerger, ND

Partners:

- African American Tobacco Control Leadership Council
- Breathe California
- Campaign for Tobacco-Free Kids
- American Lung Association
- American Heart Association
- American Cancer Society Cancer Action Network
- San Francisco Department of Public Health

Success: Ban of menthol cigarette sales in San Francisco, California and other states.

Our approach:

The SF CAN Tobacco 3 Team was instrumental in the [development of San Francisco's city ordinance](#) amending the Health Code to prohibit tobacco retailers from selling flavored tobacco products, including menthol cigarettes, in the city of San Francisco. Since the ordinance was passed in San Francisco, many other Bay Area and state counties have followed suit. In August 2020, Governor Newsom signed Senate Bill (SB) 793, in California. SB 793 which prohibits the sale of flavored tobacco products, including vapes and menthol cigarettes. The law holds the tobacco retailers, or their employees, responsible for the sale of flavored tobacco products. Individuals who possess them with the intent to sell also violate the law. The law does not criminalize an individual for purchasing, using or possessing flavored tobacco products for personal use.

Research prompting this approach:

Menthol cigarettes, used by 85% of African Americans as a result of targeted marketing by the tobacco industry, are easier to start smoking and more difficult to quit than non-menthol cigarettes.

- Gardiner PS. The African Americanization of menthol cigarette use in the United States. *Nicotine Tob Res* 2004;6:55–65

Publications:

1. Mills SD, McGruder CO, Yerger VB. [The African American Tobacco Control Leadership Council: Advocating for a menthol cigarette ban in San Francisco, California](#). *Tob Control*. 2021;30:e150-e153.
2. Gardiner PS. [The African Americanization of menthol cigarette use in the United States](#). *Nicotine Tob Res*. 2004;6(suppl 1):S55-S65.

Note: Following the successful ban of menthol cigarette sales, the Team was sunset after achieving its primary objective. Efforts have continued independently.